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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,498	10/29/2003	Abbas Amirichimch	1875.3640003/JTH/TAD	8175
26111	7590	10/17/2007	EXAMINER	
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.			JAIN, RAJ K	
1100 NEW YORK AVENUE, N.W.			ART UNIT	
WASHINGTON, DC 20005			PAPER NUMBER	
			2616	
			MAIL DATE	DELIVERY MODE
			10/17/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

### Application No.

10/695,498

### Applicant(s)

AMIRICHIMEH ET AL.

### Examiner

Raj K. Jain

### Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 8-10 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 4-7, 11-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20071011.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

Claims 15 and 17 are objected to because of the following informalities: Replace “though” with “through” as it appears throughout the subject claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

Claims 1-3, 8-10 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jirgal et al (USP 5,793,990) in view of Mohd (USP 5,933,021).

Regarding claims 1, 8, 15 and 17, Jirgal discloses a cross link multiplexer bus (Fig. 1, a Mux bus architecture), comprising:

a plurality of cross link multiplexers (Fig. 14, plurality of Mux's 36, 38, 40), said plurality of cross link multiplexers having a destination port configured to receive a signal (input ports for each Mux 36, 38, 40 is the destination port) and an origin port configured to produce said signal (outgoing ports represent origin ports); and

a plurality of interconnects (Fig. 14, Mux's interconnected via buses and other links as needed between various ports) wherein a set of interconnects of said plurality of interconnects is coupled between a pair of adjacent cross link multiplexers of said plurality of cross link multiplexers (output of 32 provides input to 36, 38 and 40 via interconnect line as shown in Fig. 14, thus coupling adjacent Mux's);

said signal is configured be represented as a series of characters (Fig. 4 where signal A is represented as series of characters, col 6 lines 60-67), and a character of

said series of characters is configured to be represented as a first data bit, a second data bit, and a first control bit (col 2 lines 15-35); a first interconnect of said set of interconnects is configured to convey said first data bit (Fig. 1, ref. 18, first interconnect A[25:18] conveys first data bit), a second interconnect of said set of interconnects is configured to convey said second data bit (second interconnect a[17:10] conveys second data bit), and a third interconnect of said set of interconnect is configured to convey said first control bit (CPU control line provides the third interconnect that conveys the control bit).

Jirgal fails to disclose where the interconnects are configured to reduce cross talk.

Mohd discloses where the interconnects are configured to reduce cross talk (Fig. 3b, col 1 lines 39-50). Crosstalk in communications lines reduces overall performance of given circuits by introducing undesired interference of adjacent signals. Thus by incorporating the noise suppression technique of Mohd within signal lines of Jirgal, noise on the Multiplexer signal lines can be suppressed with less speed degradation and area consumption and therefore improving overall circuit performance.

Further with regards to Claims 8 and 16, Mohd discloses use of voltage lines as appropriate (col 1 lines 39-50, Figs, 4, 5 and 7).

Regarding claims 2, 9, Mohd discloses third interconnect 315 (fig. 3b) inbetween first and second interconnects 210, 120 respectively.

Regarding claims 3, 10, Mohd discloses interconnects fabricated on a chip (col 1 lines 20-24).

***Allowable Subject Matter***

Claims 4-7, 11-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj K. Jain whose telephone number is 571-272-3145. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

***Raj K. Jain***

***/Raj K. Jain/***

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October 11, 2007